UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/822,043 | 03/30/2001 | Adrian Evans Conway | 00-3008 | 8439 |

32127 7590 10/04/2004

VERIZON CORPORATE SERVICES GROUP INC.
C/O CHRISTIAN R. ANDERSEN
600 HIDDEN RIDGE DRIVE
MAILCODE HQE03H14
IRVING, TX 75038

| EXAMINER | |
|---|---|
| KADING, JOSHUA A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2661 | |

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/822,043 | CONWAY, ADRIAN EVANS | |
| | Examiner | Art Unit | |
| | Joshua Kading | 2661 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-24 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 March 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Drawings*

The drawings are objected to because figure 3, element S109 has a an arrow pointing to it with no label and no indication as to what the arrow represents. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 8-15, and 20-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Sand (U.S. Patent 6,512,746 B1).

Regarding claim 1, Sand discloses "a method for determining subjective quality of a packetized media data stream having packets of encoded data, each of said packets having a header portion and a data portion each having content comprising the following steps:

replacing the content of the data portion of said copied packets with a packetized known test signal, said copied packets thereby comprising a pseudo-media stream (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

determining subjective quality of said pseudo-media stream (col. 6, lines 23-28); and

using said subjective quality of said pseudo-media stream, to determine subjective quality of said packetized data stream (col. 6, lines 29-31)."

However, Sand does not explicitly disclose "copying a portion of said packetized media data stream to obtain copied packets". Although Sand does not explicitly state the copying of packets, Sand does disclose collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The action of creating and storing the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

It would have been obvious to one with ordinary skill in the art at the time of invention to include the copied portions of packets for the purpose of creating a calibration file. The motivation for creating a voice calibration file is to be able to use the file to test a communication link for voice quality and determine if it is acceptable for human conversation.

Regarding claim 2, Sand discloses the method of claim 1. Although Sand does not explicitly disclose the copying of packets, Sand does disclose "each packet copied from said packetized data stream is timestamped (col. 5, lines 63-65) and said timestamping is used to control the temporal relationship between said copied portion of said packetized media data stream and said pseudo-media stream (col. 5, lines 63-65 where the timestamp used for correlation analysis means that the timestamp is used to control the temporal relationship between packets)." It would have been obvious to one

with ordinary skill in the art to include the timestamp for the same reasons and motivation as in claim 1.

Regarding claim 3, Sand discloses "a method for determining subjective quality of a packetized data stream having packets of encoded data, each of said packets having a header portion and a data portion each having some content, comprising the following steps:

timestamping each packet included within said packetized data stream as it is copied (col. 5, lines 63-65);

loading a known test signal into each empty packet (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

depacketizing and decoding said pseudo-media stream to obtain a pseudo-media signal (col. 6, lines 13-17); and

determining said subjective quality of said pseudo-media signal that represents the subjective quality of said packetized data stream (col. 6, lines 23-31)."

However, Sand does not explicitly disclose "copying a portion of said media stream to obtain copied packets; emptying data content of the data portion of each

copied packet". Although Sand does not explicitly state a means for the copying of packets, Sand does disclose collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The action of creating and storing the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

Further Sand does not disclose the emptying of packets so that the data portion can be replaced with test signals. However, as explained above, the act of creating an IP datagram test signal and sending it to the same destination as that indicated on incoming packets is a functional equivalent of emptying the data portion and replacing it with test signals because the packets are identical in terms of their headers and different in terms of their respective data portions.

It would have been obvious to one with ordinary skill in the art at the time of invention to include the copied portions of packets and the emptying of the packets for the purpose of creating a calibration file. The motivation for creating a voice calibration file is to be able to use the file to test a communication link for voice quality and determine if it is acceptable for human conversation.

Regarding claim 4, Sand discloses the method of claim 3. Although Sand does not explicitly disclose the copying of packets, Sand does disclose "determining packetization methodology used to packetize said data stream (col. 6, lines 13-17

where encoding schemes must be the same as decoding schemes, if they weren't how would data be decoded properly?); and utilizing said packetization methodology to packetize said known test signal prior to loading said known test signal into said empty packets (col. 6, lines 13-17 where it is obvious that if a given decoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in the art to include the determining of encoding and decoding scheme for the same reasons and motivation as in claim 3.

Regarding claim 9, Sand discloses "a system for measuring subjective quality of a real-time packetized media stream in a packet-switching network comprising:

means for reloading the empty payload portions of the selected packets with a known media signal to produce a pseudo-media stream (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

means for depacketizing and decoding said pseudo-media stream to produce a pseudo-media signal (col. 6, lines 13-17); and

means for measuring the subjective quality of said pseudo-media signal and in turn the subjective quality of said packetized media stream (col. 6, lines 23-31)."

However, Sand does not explicitly disclose "means for copying a portion of said media stream from said packet-switching network; means for emptying a payload portion of selected packets from said copied media stream portion, resulting in empty payload portions of the selected packets". Although Sand does not explicitly state a means for the copying of packets, Sand does disclose collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The action of creating and storing the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

Further Sand does not disclose the emptying of packets so that the data portion can be replaced with test signals. However, as explained above, the act of creating an IP datagram test signal and sending it to the same destination as that indicated on incoming packets is a functional equivalent of emptying the data portion and replacing it with test signals because the packets are identical in terms of their headers and different in terms of their respective data portions.

It would have been obvious to one with ordinary skill in the art at the time of invention to include the copied portions of packets and the emptying of the packets for the purpose of creating a calibration file. The motivation for creating a voice calibration

file is to be able to use the file to test a communication link for voice quality and determine if it is acceptable for human conversation.

Regarding claim 10, Sand discloses the apparatus of claim 9. Although Sand does not explicitly disclose the means for copying of data portions and emptying the data portion, Sand does disclose "means for timestamping each packet copied from said media stream (col. 5, lines 63-65), and means for using said timestamp on said copied packet to coordinate the loading of said known media signal into said emptied packets (col. 5, lines 63-65 where the timestamp used for correlation analysis means that the timestamp is used to control the temporal relationship between packets)." It would have been obvious to one with ordinary skill in the art to include the timestamp for the same reasons and motivation as in claim 9.

Regarding claim 11, Sand discloses the apparatus of claim 9. Although Sand does not explicitly disclose the means for copying of data portions and emptying the data portion, Sand does disclose "means for determining encoding and packetizing method used to prepare the packets in said copied media stream (col. 6, lines 13-17); and means for using said encoding and packetizing method to prepare the packets containing the known media signal (col. 6, lines 13-17 where it is obvious that if a given encoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in

the art to include the determining of encoding scheme for the same reasons and motivation as in claim 9.

Regarding claim 12, Sand discloses the apparatus of claim 9. Although Sand does not explicitly disclose the means for copying of data portions and emptying the data portion, Sand does disclose "means for determining decoding and depacketizing methods to be used with said copied media stream (col. 6, lines 13-17 where encoding schemes must be the same as decoding schemes, if they weren't how would data be decoded properly?); and means for using said decoding and depacketizing methods on said known media signal (col. 6, lines 13-17 where it is obvious that if a given decoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in the art to include the determining of decoding scheme for the same reasons and motivation as in claim 9.

Regarding claim 13, Sand discloses the apparatus of claim 9. Although Sand does not explicitly disclose the means for copying of data portions and emptying the data portion, Sand does disclose "means for determining the encoding/decoding and packetization/depacketization methods used with the copied packets in said media stream (col. 6, lines 13-17 where encoding schemes must be the same as decoding schemes, if they weren't how would data be decoded properly?); and means for using

encoding/decoding and packetization/depacketization methods in handling the packets of the known media signal in the preparation of said pseudo-media stream (col. 6, lines 13-17 where it is obvious that if a given decoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in the art to include the determining of encoding and decoding scheme for the same reasons and motivation as in claim 9.

Regarding claims 14 and 20, Sand discloses "an apparatus that measures subjective quality of information contained in a packetized media stream a plurality of packets, each of said packets having a header portion and a payload portion, comprising:

a second device that substitutes a known test signal for the information contained in the copied portion of said packetized data stream to produce a pseudo-media stream (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

a third device that depacketizes and decodes said pseudo-media stream to produce a pseudo-media signal (col. 6, lines 13-17); and

a fourth device that determines subjective quality of said pseudo-media signal and subjective quality of the information contained in said packetized data stream (col. 6, lines 23-28)."

However, Sand does not explicitly disclose "a first device that copies a portion of said packetized data stream". Although Sand does not explicitly state the device for copying of packets, Sand does disclose a device for the collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The creating and storing of the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

It would have been obvious to one with ordinary skill in the art at the time of invention to include the device for copying portions of packets for the purpose of creating a calibration file. The motivation for creating a voice calibration file is to be able to use the file to test a communication link for voice quality and determine if it is acceptable for human conversation.

Regarding claim 15, Sand discloses the apparatus of claim 14. However, San does not explicitly disclose "means for emptying the information content of each of said copied packet; and means for loading a packetized known test signal into each of said empty packets." Although Sand does not disclose the emptying of packets so that the data portion can be loaded with test signals, as explained above, the act of creating an

IP datagram test signal and sending it to the same destination as that indicated on incoming packets is a functional equivalent of emptying the data portion and replacing it with test signals because the packets are identical in terms of their headers and different in terms of their respective data portions. It would have been obvious to one with ordinary skill in the art to include the means for emptying and loading data portions for the same reasons and motivation as in claim 14.

Regarding claim 21, Sand discloses the apparatus of claim 20. Although Sand does not explicitly disclose the device for copying of data portions, Sand does disclose "said copied segment of the packetized media stream is stored in a memory (figure 5, element 66 shows the memory device used to stored the calibration file which is made up of the copied segments)." It would have been obvious to one with ordinary skill in the art to include the memory for storing the copied segments for the same reasons and motivation as in claim 20.

Regarding claim 22, Sand discloses the apparatus of claim 20. Although Sand does not explicitly disclose the device for copying of data portions, Sand does disclose "said second device determines the encoding scheme of said packetized media stream (col. 6, lines 13-17)." It would have been obvious to one with ordinary skill in the art to include the determining of the encoding scheme for the same reasons and motivation as in claim 20.

Regarding claim 23, Sand discloses the apparatus of claim 20. Although Sand does not explicitly disclose the device for copying of data portions, Sand does disclose "the second device determines the packetization scheme of said packetization media stream (col. 6, lines 13-17 where the IP and H.323 schemes all speak to the packetization of the media stream and thus are automatically determined)." It would have been obvious to one with ordinary skill in the art to include the determining of the packetization scheme for the same reasons and motivation as in claim 20.

Regarding claim 24, Sand discloses the apparatus of claim 20. Although Sand does not explicitly disclose the device for copying of data portions, Sand does disclose "said second device encodes and packetizes the known test signal (col. 6, lines 13-17 where it is obvious that if a given encoding and packetization scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in the art to include the determining of the encoding and packetization of the test signal for the same reasons and motivation as in claim 20.

Claims 5-8 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sand in view of Steagall et al. (U.S. Patent 5,127,001).

Regarding claim 5, Sand discloses the method of claim 3. Sand further discloses "each of said header portion contains a source identifier (col. 5, lines 63-64)". However, Sand lacks what Steagall discloses, "separating said copied packetized data stream by source using said source identifier portion of each copied packet (col. 8, lines 60-62)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the separating of copied data by source identifier for the purpose of storing the packets from different sources in a respective buffer. The motivation for storing the messages in queues according to source is to effectively synchronize the voice packets coming in to avoid delays (col. 10, lines 29-32).

Regarding claim 6, Sand and Steagall disclose the method of claim 5. However, Steagall lacks what Sand further discloses, "said header portion of each copied packet includes a sequence number (col. 5, lines 66-col. 6, lines 1-4) and said sequence number is used to determine which packetized known test signal packet replaces a copied media stream packet for said pseudo-media stream (col. 5, lines 66-col. 6, lines 1-4 where the function of the sequence field of the header is really a matter of design choice because, by its very nature, the sequence number imparts an order on the packets arriving and as is known, the transport protocol header contains sequence numbers used for a variety of different reasons)." It would have been obvious to one with ordinary skill in the art to include the sequence number for the same reasons and motivation as in claim 5.

Regarding claim 7, Sand and Steagall disclose the method of claim 6. However, Steagall lacks what Sand further discloses, "order of the sequence numbers is maintained in substituting said packetized known test signal for the data contained in each copied packet (col. 5, lines 54-col. 6, lines 1-31 where the entire process of testing the voice quality of a connection requires the test packets sent to be in sequence so that they may be analyzed at the receiving end)." It would have been obvious to one with ordinary skill in the art to include the maintaining of the order for the same reasons and motivation as in claim 5.

Regarding claim 8, Sand discloses "a method for determining subjective quality of a multi-media-source packetized data stream of packets each having data content, said method comprising the following steps:

timestamping each of said copied packets to obtain timestamped copied packets (col. 5, lines 63-65);

identifying encoding/decoding and packetization/depacketization methods used on said selected media stream (col. 6, lines 13-17 where the packetization is automatically determined by the use of IP and H.323);

replacing said data content of each copied packet in said selected media stream with a packetized known test signal while maintaining the sequence of said copied packets to produce a pseudo-media stream (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test

packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

depacketizing and decoding said pseudo-media stream using said timestamped copied packets to maintain the same temporal sequence as that with which the packets were originally copied to produce a pseudo-media signal (col. 6, lines 13-22 whereby repeating the steps, the temporal relationship between packets will be taken into account); and

measuring subjective quality of said pseudo-media signal to determine subjective quality of said selected media stream (col. 6, lines 23-31)."

However, Sand does not explicitly disclose "copying a portion of said multi-media-source packetized data stream to obtain copied packets". Although Sand does not explicitly state the copying of packets, Sand does disclose collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The action of creating and storing the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

Sand however, further lacks what Steagall discloses, "separating said copied packets according to their respective media sources to obtain a separated multi-media stream (col. 8, lines 60-62); selecting a media stream from said separated multi-media

stream to obtain a selected media stream (col. 8, lines 60-62 whereby separating the media streams into their respective buffers according to source means that when a packet is to be read out an individual stream will be selected)".

It would have been obvious to one with ordinary skill in the art at the time of invention to include the separating of copied data by source identifier for the purpose of storing the packets from different sources in a respective buffer. The motivation for storing the messages in queues according to source is to effectively synchronize the voice packets coming in to avoid delays (col. 10, lines 29-32).

Regarding claim 16, Sand discloses "an apparatus for measuring subjective quality of the information contained in a single packetized data stream included in a multi-source packetized data stream comprising:

a third device for replacing the information content of each copied packet with a known signal to create a pseudo-media stream (col. 7, lines 35-37 where the measuring of voice GOS is described in col. 5, lines 55-col. 6, lines 1-31; since the test IP datagrams are being sent to the same end point as the intended destination, creating these IP test packets and sending them is functionally equivalent to replacing the data of incoming packets with the test signals because in both packets the packets are then identical in terms of their header structure, so its as if the data was replaced with test IP datagrams);

a fourth device for depacketizing and decoding said pseudo-media stream to produce a pseudo-media signal (col. 6, lines 13-17); and

a fifth device for measuring the subjective quality of said pseudo-media signal and in-turn the subjective quality of the information contained in said single packetized data stream (col. 6, lines 23-28)."

However, Sand does not explicitly disclose "a first device for copying a portion of said multi-source packetized data stream". Although Sand does not explicitly state a device for the copying of packets, Sand does disclose collection of IP voice datagrams used to create a calibration file (col. 7, lines 2-15). The action of creating and storing the calibration file indicates that these IP datagrams had to be processed and stored (i.e. copies put in memory) for future use. This stored data is a functional equivalent of copied data because it has been stored in memory and as long as it is not erased, it can be "copied" as many times as necessary.

Sand however, further lacks what Steagall discloses, "a second device for separating a single packetized data stream from said copied portion of said multi-source packetized data stream (col. 8, lines 60-62)".

It would have been obvious to one with ordinary skill in the art at the time of invention to include the separating of copied data by source identifier for the purpose of storing the packets from different sources in a respective buffer. The motivation for storing the messages in queues according to source is to effectively synchronize the voice packets coming in to avoid delays (col. 10, lines 29-32).

Regarding claim 17, Sand and Steagall disclose the apparatus of claim 16. However, Sand lacks what Steagall further discloses, "said second device reads a

source identifier contained in each copied packet; and diverts selected packets having a common source identifier (col. 8, lines 60-62 whereby separating the packets by a source identifier allows each packet to be diverted to its respective buffer)." It would have been obvious to one with ordinary skill in the art to include the source identifier and diverting for the same reasons and motivation as in claim 16.

Regarding claim 18, Sand and Steagall disclose the apparatus of claim 16. However, Sand and Steagall both do not explicitly disclose "said third device empties the information content of each packet of said separated single packetized data stream and loads a packetized known test signal into said empty packets." Sand however, describes the act of creating an IP datagram test signal and sending it to the same destination as that indicated on incoming packets is a functional equivalent of emptying the data portion and replacing it with test signals because the packets are identical in terms of their headers and different in terms of their respective data portions.

It would have been obvious to one with ordinary skill in the art at the time of invention to include the copied portions of packets and the emptying of the packets for the purpose of creating a calibration file. The motivation for creating a voice calibration file is to be able to use the file to test a communication link for voice quality and determine if it is acceptable for human conversation.

Regarding claim 19, Sand and Steagall disclose the apparatus of claim 16. However, Steagall lacks what Sand further discloses, "means for identifying the

encoding/decoding and packetization/depacketization methods used on and to be used on the information contained in said single packetized data stream (col. 6, lines 13-17 where encoding schemes must be the same as decoding schemes, if they weren't how would data be decoded properly?), and means for using said encoding and packetization methods in the preparation of said pseudo-media stream (col. 6, lines 13-17 where it is obvious that if a given decoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications); and means for using said decoding and depacketization methods in the preparation of said pseudo-media signal (col. 6, lines 13-17 where it is obvious that if a given encoding scheme is used for the transmission of non-test voice signals, it would be used for test voice signals to maintain the same operating conditions as would occur in regular voice communications)." It would have been obvious to one with ordinary skill in the art to include the means for identifying encoding and packetization for the same reasons and motivation as in claim 16.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

September 28, 2004

KENNETH VANDERPUYE
PRIMARY EXAMINER

KENN JYE
PRIM INER